INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. Experiments on the Transmissibility of Carcinoma and Sarcoma. By Dr. Tilanus Jr. (Holland). The author transplanted pieces of carcinoma and sarcoma of different sizes, not larger than a pea, into the abdominal cavity of white rats. He then vacinnated from these ones other rats; at first daily and later on every second day. Within the first few weeks the majority of the tumors increased in size, but then again decreased in circumference. The pieces lay freely in the abdominal cavity, connected only by means of a single band wtth the mesentery. Microscopically examined they were found to consist of connective tissue, in layers, not having any longer the characteristics of carcinomatous or sarcomatous tissue; the nucleus consisting chiefly of detritus. In a few cases larger tumors developed after several months, which were also only connected by solitary bands with the mesentery and contained pus. The latter was introduced into the abdominal cavity of other rats and resulted after the lapse of about twelve days in the development of similar pus—containing suspended corpuscles. Inoculation on agar yielded cultures, which, on microscopic examination, were seen to contain cocci. According to to these experiments Tilanus did not succeed in transmitting carcinoma or sarcoma by inoculation.—*Weekbl. van het Nederl; Tijdschr. voor Geneesk*, 1889, ii.; No. 22.

II. On Bromide of Ethyl Narcosis. By Dr. Haderup (Denmark). The results of his experiments made in the clinic with bromide of ethyl as an anæsthetic were given by Haderup in a lecture before the Copenhagen Medical Society.

The speaker had used, in the course of about a year, this anæsthetic

in one hundred cases and found it excellent in operations of short duration. It is easily used, free from danger and without any disagreeable after-action; but one must be sure and have a good preparation, as for example *Merck's*. It is quite inexpensive. The speaker only has induced *primary narcosis*, *i. e.*, he has only given it until anæsthesia was produced and then removed it. In all patients with heart and lung diseases it is contraindicated; one patient with acute bronchitis was experimented with to see its action on the pulmonary mucous membrane, which, however, in this case was negative. All the operations were extraction of teeth; in most of the cases two, three and once eleven teeth were extracted. In no case did the patient feel anything. The dose for adults has as a rule been eleven to twelve grammes, which is inspired at one time. Esmarch's mask was used with a double cover, however, and indeed it must be so tight as to allow but little atmospheric air to get in. The speaker described in detail fifty cases of narcotization; six men, thirty-six women and eight children. This anæsthetic acts especially well in children. It induces nausea and vomitting, but less so than chloroform; it seems as though the time of the last meal had but little influence. In not a few cases excitation was noticed, but it was as a rule only slight. Nothing is said by the speaker on its influence upon the pulse. The pupils dilate according to the profoundness of the narcosis; in one case only were they contracted. Narcosis appeared, on an average, in children after thirty-two, in adults after forty-six seconds; it lasted in the former one, in the latter one and a half minutes, but the analgesia may last somewhat longer. The general condition rights itself a few minutes after; but not rarely the patients have nausea and vomiting after awakening. A little vertigo is very frequent, lasting, however, only a few minutes. This drug may, of course, be used in other minor surgical operations. Anæsthesia may be prolonged to ten and fifteen minutes, or the patient may be allowed to awaken and then be narcotized at once again. If anæsthesia be prolonged beyond ten and fifteen minutes narcosis does not apparently continue, the patient becomes restless and the painful sensations seem to return. Bromide of ethyl has the advantage over chloroform of being less dangerous; over ether of being less in-

flammable as in operations where illumination or thermo cantery is used. In the discussion which followed Dr. H.'s lecture, Dr. Engelsen states that in very nervous patients he has gotten poor results as only an alleviation of pain, but no freedom from pain was produced. The patients also have a very badly smelling breath for several days after narcotization. The muscles become only very slightly relaxed. Dr. Wm. Meyer has used bromide of ethyl narcosis in a small number of operations on the pharynx and ear, in children as well as in adults; in adults it was given while sitting, in children while lying. He used five to twenty grammes of the drug and as a rule induced only primary narcosis, which made its appearance after one half and five minutes. None of the operations lasted over four minutes and during that time there was always analgesia; in aural operations the narcosis was often continued during the operation. He has seen excitation more frequently and it has been longer lasting than in Haderup's cases; but movements, cries, etc., should not hinder one to begin or continue the operation, as nevertheless there is analgesia. When the arm falls down without resistance, analgesia was always complete. Disagreeable consequences were seen very rarely; once apnœa was remarked, The cyanosis of the face is quite distinct. He has seen more disagreeable after-effects than Haderup. The patients awaken quickly; but in about onethird of the adults there followed partly a sense of weight in the the extremities, partly vertigo, and sometimes nausea. As a rule these effects soon pass away, but not always; for in one patient there was headache lasting one day; in a second patient it lasted two days and several were unable to go home alone. In children the after-action is less. In a child with very large adenoid vegetations a very violent hæmorrhage took place from the nose, but this ceased the moment the child was raised up. In many cases everything goes on smoothly and the remedy, in general, is excessively pleasant to administer and is to be recommended in private practice, as one may get on without an assistant. Dr. Haderup observed that also in every nervous woman he was always able to produce narcosis; he has heard no complaint of badly smelling breath. He also mentions the want of muscular relaxation, seen, for example, if one will introduce a wedge between the

teeth. He has also seen one case of apnœa. He has never had the patients complain of a sensation of cold, nor seen any sign of irritation of the mucous membrane of the air passages.—*Bibliotek for Laeger*, R. 7, Bd. 1.

F. H. PRITCHARD (Boston).

III. The Transplantation of Skin From Dead Body to Granulating Surface. By DR. SOPHIA S. IVANOVA (St. Petersburg, Russia). In the *Wiener Medizinische Blætter*, August 8, 1888, Drs. Bertens and Werner published a remarkable case of a boy, æt. 14 years, with intractable extensive ulcers of the legs, in which they had successfully transplanted 24 skin grafts (1 or 2x1 centimetres) excised from the body of an old woman (æt. 75 years) about 20 minutes after her death. The perusal of the author's paper induced Dr. Ivanova to try their method in the case of a poorly-nourished woman, æt. 75 years, who had received a burn of the third degree involving the whole leg and dorsal aspect of the foot. In about a fortnight the injured integuments sloughed away to leave an enormous freely suppurating granulating surface. The grafting (resorted to shortly after the separation of the sloughs) was made at two sittings, with the interval of $3\frac{1}{2}$ weeks, the material being derived from two new born infants' bodies, $1\frac{1}{2}$ and 2 hours after the children's death. During a short period elapsing between the excision and transplantation, the strips and pieces (of varying size) were kept in a 0.6% solution of chloride of sodium at 40° C. Every one and all of them became firmly adherent to the surface in 48 hours, while in 2 or 3 days the epidermis began to grow around all the grafts. Speedy and sound healing ensued. The author believes that the following conclusions are justified by her case and that of the said German authors.

1. The method offers undoubted advantages over Reverdin's plan in *a*, its securing an "incomparably more rapid" healing of lesions and hence very substantially lessening injurious effects of prolonged suppuration and lying in bed; *b*, its giving much better functional results (through preventing cicatricial contraction, etc.); *c*, the material is easily obtainable in abundance, and that without inflicting suffering or incon-

venience to any human being. 2. The skin must be taken always from bodies of such patients who have not had syphilis, septicæmia or any other infectious disease. 3. The best material is afforded by bodies of new born infants of healthy mothers, the infantile tissue possessing most energetic vitality. 4. It is advisable to employ rather long strips measuring not more than 2 or 3 centimetres in width. Small-sized pieces are easily washed away by pus or blood. 5. Only the skin proper, freed from all subcutaneous cellular tissue, should be transplanted. 6. Be the granulating surface clean and non-atonic, no scraping is necessary. It is fully sufficient to previously thoroughly wash out the surface, after which the grafts should be carefully adjusted and slightly pressed down with dressing. 7. The best dressing material is gauze soaked in a boracic acid solution and then wrung out. The tissue absorbs secretions very well, never becomes adherent to grafts, and hence may be easily removed without disturbing the latter. 8. The transplantation must be practiced as early as possible. Thus, in cases of deep burns it should be resorted to immediately after the separation of sloughs. When large-sized strips or pieces are used, even a free suppuration cannot prevent their adhering to the surface. —*Khirurgitchesky Vestnik*, June, 1890, p. 377.

VALERIUS IDELSON (Berne).

NRVOUS AND VASCULAR SYSTEMS.

I. Operative Interference in Spondylitic Paralysis. By PROF. KRASKE (Freiburg). Kraske reported four cases in which he had opened the spinal canal and removed tubercular formations pressing upon the cord. The paralysis in all cases was complete and the bladder and rectum were affected. In one case there was caries of the vertebral arches with abscess of the back, in the other the tubercular process started from the neck of a rib, resulting in abscess upon the back and involvement of the nerve roots in the spinal canal. In the other two cases there was the ordinary spondylitis of the body of the vertebræ with deformity. In most of these cases we must be content with removing the compressing growth or formations but the operation will hardly be more than palliative. In most cases it is impossible

to remove the entire focus of disease. We gain enough if we restore the paralyzed limbs to function and improve the nutrition of the patient. Again, by the operative interference we remove several laminæ and spines of vertebræ in that part of the spine where support is most needed. It can be seen that the curvature of the spine may thus be greatly increased and a new source of injury to the cord introduced. These unfavorable results may be in a measure prevented by appropriate position of the patient and a regeneration of the removed bony parts in some cases results. Inasmuch as in these cases the dura is not involved and in operating it is not necessary to lay open the dura, the operation may be looked upon as one devoid of danger. If the bladder and rectum be involved the operation is certainly justifiable upon, no other ground than the relief of the patient's helpless condition. Kraske has operated in the well-known manner. The fungous granulations were removed from the surface of the dura, to which they adhered, with scissors and forceps. In three cases the granulations were partly disintegrated and suppurating; in one case there was an abscess with about ʒij of pus in the spinal canal. In one case a man, æt. 33 years, who died eight weeks after operation, the result was unsatisfactory, it was shown that though the laminæ had been resected, the whole of the fungus had not been removed. The pulsation of the cord did not return as in the other 3 cases after operation. In the remaining 3 cases the results were very satisfactory. The cases in which operation is indicated are mostly those of caries of the laminæ of the vertebræ with consequent abscess and compression. Caution is to be used in selection of cases.

Every possible means of treatment should be tried before resorting to operation. Operation is then only resorted to when compression of the cord by a growth outside the dura can be diagnosed with moderate certainty.—*Beilage zum Centblt. f. Chir.*, No. 25, 1890.

HENRY KOPLIK (New York).

II. Popliteal Aneurism Cured by Prolonged Digital Compression. By MR. RIVINGTON (London). A male, æt. 43 years, who had not suffered from rheumatism, syphilis or gonorrhœa,

but who was in a bad physical condition from the excessive use of liquor, presented a well developed aneurism in the left popliteal space. His heart was much enlarged and the arteries were rough and hard while the aorta was dilated. The femoral artery pulsated very forcibly and appeared to have undergone pathological changes. For these reasons it was decided to avoid ligature of the femoral if possible. Accordingly, digital compression of the artery was tried extending over a period of about two months, as follows:

December	9,	Digital	Compression	for	-	-	-	27½	hours.
"	13,	"	"	"	-	-	-	27	"
"	18,	Tourniquet	"	"	-	-	-	10	"
January	30,	Digital	"	"	-	-	-	48	"
February	3,	"	"	"	-	-	-	24	"
"	5,	"	"	"	-	-	-	12	"
"	6,	"	"	"	-	-	-	36	"
Total,	-	-	-	-	-	-	-	184½	hours.

More than fifty students participated in the compression. On December 10, an abrasion appeared at the point of pressure, which did not heal until the latter part of the month, and necessitated a suspension of the compression until the end of the latter month. Meanwhile the leg was kept flexed and a pad applied over the aneurism in the popliteal space from January 1 until the sore healed, when the digital pressure was resumed, a fourteen-pound weight being applied to the fingers; the skin broke down however under this and the weight had to be discarded and the artery compressed above and below this point. Pulsation ceased six hours before the pressure was removed. A day or two later the patient was up and walking about and a complete cure was obtained.—*Lancet*, May 3, 1890.

JAMES E. PILCHER (U. S. Army.)

III. Suture of the Arteries. By ALEXANDER JASSINOWSKY (Dorpat, Inaugural dissertation Dorpat 1889). The writer, after a historical review of attempts at suture of arteries, calls attention to the fact that all experiments up to now in closing wounds of the arteries

have been quite negative, for in not a single case was permeability of the vessel to be obtained. That small punctured wounds of arteries do heal is known, and hence in imitating nature one should endeavor to follow this same process; and this is attained in the arterial suture. His conclusions based upon numerous animal experiments are as follows.

1. Suture of the arteries induces healing of the wound of the vessel by first intention.

2. Hæmorrhage may be entirely avoided after the operation.

3. In the further course of the wound neither secondary hæmorrhage, obstructive thrombus, nor the formation of aneurysms is to be feared.

4. Suture of the arteries is indicated in recent and clean longitudinal, oblique and flap-shaped wounds in large vessels which involve not more than half of the circumference of the latter.

5. The strictest antisepsis is a *sine qua non* of suture of the arteries:

6. Suture of the arteries is easily carried out.

The operative procedure is as follows: The vessel is occluded by pressure; the arterial wall is laid bare at the place of suture and the arterial sheath pushed back. Then sutures are introduced through the tunica adventitia and media which are fastened by a double knot and the ends of the sutures clipped off. The vessel sheath, fasciæ and skin are also sutured after lessening somewhat the pressure and the entire wound is covered with photoxyline.

F. H. PRITCHARD (Boston).

HEAD AND NECK.

I. Foreign Body in the Frontal Sinus. By DR. NIKOLAI N. ESAULOFF (Moscow). The author narrates the following rare and interesting case from Professor N. V. Sklifosovsky's clinic, referring to a well-made and nourished peasant, æt. 28 years. About 11 months previously the patient's one-barrelled gun had burst in his hands, causing a wound of the forehead with hæmorrhage, total right-sided blindness, vertigo, splitting headache, and repeated vomiting of 24

hours' duration. In a day or two the frontal and orbital regions became intensely swollen, while later on there appeared incessant blood-stained purulent discharge from the wound and an occasional flow of pus from the right nostril. About the end of the third month, the frontal wound contracted down to the size of a straw, though still continuing to discharge some turbid serum. For the next four months the man felt practically well, regularly attending to his hard field-work. Subsequently, however, the wound became enlarged and the discharge began to increase. About a month before admission the patient extracted from the fistula a piece of blackened wood, 1½ cm. long. On examination by the author, the right orbital region was found strikingly prominent and displaced downward and outward, the superior inner angle of the right orbit standing 2 cms. below the level of that of the left. The right eyeball was bulging out and deviated downward and outward about 2 cms. Slightly to the right from the median line, above the glabella there was seen a depression 2 cms. long and 1½ broad, from the bottom of which a black, hard, sharp-edged foreign body, measuring 1¼x¾ cm., was protruding. A probe introduced under the inferior surface of the body could penetrate 3 cms. deep, striking some hard obstacle. There was present abundant purulent discharge. The right cornea proved to be partially infiltrated, choroid membrane and central retinal artery ruptured, retina detached, vitreous hody opaque, optic disc atrophied. Smelling was very defective, the patient complained of occasional right-sided frontal and parietal headache, but otherwise felt fairly well. The wound was enlarged and the foreigh body extracted (with considerable difficulty). It was found to be a gun's chamber weighing 60 grammes and measuring 3½ cms. in length and 1¾ in diameter. In the posterior wall of the right frontal sinus a hole (of the size of a cherry stone) was detected, through which the dura mater could be seen. A forefinger introduced into the sinus easily penetrated into the right orbit. The wound was washed out with boracic acid, and the sinus plugged with iodoform gauze. Recovery went fairly smoothly. On examination, 20 days later, exophthalmus proved to have markedly decreased, the orbital regions being

almost symmetrical.—*Letopis Khirurgitcheskaho Obshtchestva v' Moskve*, No. 3, 1890, p. 158.

VALERIUS IDELSON (Berne.)

II. The Treatment of Stenoses of the Œsophagus. By DR. GRASER (Erlangen.) The treatment of stenoses of the œsophagus, especially those caused by caustics, is very difficult. The reason of this is, first, the pain caused by the bougie treatment, and secondly, the absence in the early stages of symptoms which in the patient's mind necessitate treatment. It is only when death through starvation threatens the patients that they will submit to treatment. At this late stage the stenoses have become very narrow and are low down; possibly a few centimetres above the cardiac orifice; there may be a second stenosis at the level of the cricoid cartilage and a third at the level of the bifurcation. If such stenoses are to be treated with bougies this must be done daily and for a period of at least a year, sometimes more, until the largest sizes can easily be passed. If the stenosis is very narrow it is not always possible to reach the stomach with the sound; this is due partly to the curve at the mouth. Even should a sound be passed in these cases, a cure is not necessarily promised. The most various forms of instrumeuts have been recommended in these extreme cases and the author advises therefore a preliminary œsophagotomy as an aid to treatment. Such a course is pursued in the Erlangen Clinic by Prof. Heineke. The bougies can be passed quite easily even in very narrow stenoses through an opening in the neck; there is no curve to contend with. The great advantage, however, lies in the fact that the sound can be allowed to remain in situ a long while and thus a rapid dilatation may be secured. At the end of a week the narrowest stenoses will allow the passage of a very large sized sound and food can be administered through a hollow bougie. The opening in the neck is allowed to close if the bougies of large size can be easily passed through the mouth. The procedure is without any special danger and was formerly employed only in desperate cases. Carcinomatous strictures may be treated equally well with this method.—*Beilage zum Centblt. f. Chirg.*, No. 25, 1890

III. Final Results after Arterial Ligation in Struma. By Prof. Rydygier (Krakau). After citing the eleven cases of ligation of Porta, Wölfler, Obalinski, Billroth and Matlakophi, the author described his own 21 cases of ligation of the thyroidal arteries which had been operated upon some time past at an interval which allowed some deduction as to the value of this operation. In ligating the superior thyroid the method of Droback was used in 14 cases. The artery with this method is easily found even in the largest goitres. The author has concluded that the unilateral ligation of the vessels is unsatisfactory in spite of the good results of Porta and Wölfler. Less satisfactory is the ligation of either both superior or both inferior thyroids; Kocher's method of ligation is also not productive of permanent results Collateral circulation is soon and satisfactorily established and the result is nil. Cachexia as far as statistics show is not to be feared after the above. Even theoretically this would not be so inasmuch as the goitre does not disappear entirely though all the arteries be ligated. In struma fibrosa the ligation of all four arteries is of no value. In cystic goitre the results have not been good; in none of Rydygier's cases did the cysts become smaller after operation. These cases had to be treated subsequently with enucleation of the cysts. In gelatinous struma cysts appeared after ligation which did not exist previous to this operation. In gelatinous struma ligation in large struma relieved the dyspnœa and reduced the size of the goitre somewhat.

The results, however, were so unsatisfactory that in one case a first resection was subsequently (one year later) resorted to. The best results were attained in small recent parenchymatous strumas, in which the strumas become smaller, even normal, in size. In the discussion which followed Eiselberg (Vienna) stated that Billroth had ligated in 7 cases of very vascular parenchymatous strumas. Four were cured. The remaining 3 were subsequently extirpated.—*Beilage zum Centblt. f. Chir.*, No. 25, 1890.

Henry Koplik (New York.)

IV. Report of 31 Cases of Intubation of the Larynx in Diptheria. By Dr. Urban (Leipzig). The above paper is

founded upon a series of cases operated upon in the service of Prof. Thiersch of Leipzig. The operation of intubation was performed in this clinic from December 15, 1887, to March 25, 1888, and the above is the result of operations performed in this period. The author gives a very concise description of instruments and operative procedure; the well-known difficulties and accidents attending the operation are also treated of. The difficulties of feeding these cases seems to have been great in the Leipzig clinic at a time when this obstacle was treated by the mechanical attachment of Waxham to the tube of O'Dwyer but the reviewer fails to find any mention of the simple device of position which O'Dwyer now tells us is quite satisfactory in overcoming difficulties in this direction. Of the 32 cases of intubation 18 had to be tracheotomized subsequently. The causes alleged are difficult nutrition (3), insufficient respiratory space (8), sudden obstruction by membrane (4), œdema glottidis (1), insufficiency in nutrition and respiration (2). All the cases thus tracheotomized died. Of the remaining intubated cases (14) only 3 recovered and these were cases of slight severity. The ages of the children ranged from 1 to 8 years. The causes of death in the intubated cases were bronchitis, diphtheria with sepsis, acute nephritis, gangrene of the lung. Among the advantages cited for intubation are; *a*, in this operation the air passes through the natural passages thus obviating the necessity of warming or medicating the air of the sick room; *b*, intubation is certainly a bloodless operation and eliminates to a great extent any sepsis though the pressure caused by the tube in intubation may lead to sepsis; *c*, the granuloma of the tracheal opening in tracheotomy is avoided, though pressure effect of the O'Dwyer tube even at its lower extremity cannot be eliminated: pneumonias (schluck pneumonia) and pulmonary gangrene are certainly rarer than commonly supposed and are not caused by the tube or the operation but rather occur in patients whose vitality is very low. Both operations may be regarded as of equal difficulty in performance. Intubation has the advantage of needing less preparation and to the practicing physician it is important to be always in a position to perform an immediate step for the relief of his patient. The immediate effect of intubation is striking and not to be

misinterpreted while on the other hand the difficulties in swallowing are always present to a greater or less degree, whereas, in tracheotomy this is not the case. In 18 of the above cases subsequent tracheotomy was necessary to relieve the symptoms which author thinks speaks in favor of tracheotomy (though none of these secondary tracheotomies recovered. Reviewer). Author thinks that the milder cases of diphtheria of the larynx are only fitted for intubation and that the severe cases of diphtheria of the larynx are fitted for tracheotomy only. He thinks that tracheotomy is the far reaching and more satisfactory operation. The advantages brought by intubation cannot compensate the danger of the same. Intubation has been abandoned since 1888 in Leipzig. (It might not be out of place to say here that the above conclusions as regards intubation are of interest in view of the fact that O'Dwyer has always insisted that his operation was performed by himself when he was certain that the patient would die if not relieved. We believe we are right when we say that O'Dwyer has from the first fought against hap hazard intubation. He has insisted that he has only intubated in the severest cases, "the forlorn hope" cases, and in these cases one of his statistics shows a recovery of 24%. We can only explain the conclusions of the German author on the ground that he has expected too much from the reading of cases of intubation by American operators recorded as successful which perhaps O'Dwyer himself would never have intubated. Reviewer).—*Deutsche Zeitsch. f. Chir.*, bd. 31, heft 1 and 2.

HENRY KOPLIK (New York).

V. **Thyreotomy for Multiple Papilloma of the Larynx.** By VAN ANROOY (Holland). In October, 1887, a girl, æt. 17 years, came under the author's treatment for chronic hoarseness which had lasted for 5 years. The cause of the affection was found to be a chronic laryngeal catarrh and papillomata at the free edge of the true vocal cords. Otherwise the patient was healthy. The neoplasms were removed, galvano-cautery applied and the vocal cords were brushed over with a solution of nitrate of silver. Phonation did not improve and soon new papillomata developed which were again re-

moved. This operation had to be repeated several times. In September; 1889, the tumors also attacked the false vocal cords and finally caused such dyspnœa, that tracheotomy became a necessity. A fortnight later, when thyreotomy was to be performed for the removal of the papillomata, the canula was seen to be occluded by soft granulations in the trachea; these were removed and a large sized English catheter inserted. After eight days the patient could breathe without difficulty through a silver canula. Thyreotomy was now performed. A tampon canula could not be used on account of the narrow calibre of the trachea. Artificial respiration had to be resorted to twice at the beginning of the chloroform anæsthesia. This anæsthetic was, therefore, discontinued and 1 gramme of a 5%. solution of cocaine was injected along the larynx. The larynx was divided as far as the thyroid cartilage and ligamentum conicum; the tumors were removed and the places of their origin cauterized; some more cocaine being instillated while this was done. The hæmorrhage was not severe, and violent attacks of cough expelled the blood which ran down the trachea, thus rendering tamponade dispensible. The incision in the thyroid cartilage was closed by three catgut sutures. The operation was perfectly painless for the patient. Five days after the operation the wound had closed by first intention; the canula was removed. Entire healing of the wound resulted a few days later. The sound of the voice was very much improved.—*Weekbl. van het Nederl. Tijdsschr. voor Geneesk.*, 1890, i, No. 8.

VI. **Foreign Body in the Right Bronchus.** By Dr. J. Bondesen (Copenhagen). The following case was presented to the Copenhagen Medical Society: A boy, æt. 3 years, was brought to the "Kommune-Hospital;" the child while sitting and playing with some kernels from a piece of St. John's bread, was suddenly seized with difficulty in breathing, which however soon passed away and when the speaker saw the patient the breathing was natural; physical examination of the larynx and chest revealed nothing abnormal. In the course of the night following there was some dyspnœa, which increased

towards morning and for which toward noon of the next day deep tracheotomy was performed. No foreign body could, however, be found and it was supposed to have sunken into a bronchus. The respiration after the operation and introduction of the canula became freer. The general condition during the cource of the day was quite good, but toward evening the dyspnœa increased more and more, and when the speaker saw the patient a few hours after there was extreme œdema with pronounced cyanosis and collapse. Physical examination of the chest revealed the entire right lung to be completely out of function, and the foreign body in the right bronchus and completely occluding it. The canula was then removed and after considerable force a pair of pharyngeal forceps were inserted deeply down into the right bronchus, the foreign body grasped and extracted; it proved to be a kernel of St. John's bread, swollen up to 3 or 4 times its ordinary size. Recovery took place and the child was perfectly well in fourteen days.

The speaker regards such cases as quite rare, for in looking over the various large statistical tables on foreign bodies in the air passages, (Kühn Gross, Sander and others) he has only found one such case, (Guersant's) where by a fortunate tracheotomy a bean was removed from one bronchus. On the contrary there are several cases of fortunate extraction of irregular and non-occluding foreign bodies from a bronchus, scattered through the literature. In the discussion which followed Dr. E. Schmiegelow communicated the case of a man, æt. 50 years, in whom a rhinolith with a small seed-like kernel as a nucleus, was found. The patient, when about 4 years old, had played with some small seeds, when suddenly he began to cough, had bronchitis, pneumonia and empyema, and later suffered continually from cough with purulent expectoration and dullness here and there on percussion. Schmiegelow assumed that one of the seeds had gotten into the bronchus, caused there the local trouble and at one or an other time had been coughed up and lodged in the posterior nares whence it was removed, after which all the symptoms disappeared.—*Hospitals Tidende*, March 26, 1890.

A. PICK (Boston.)

CHEST AND ABDOMEN.

I. Extensive Resection of the Thorax Wall With Permanent Exposure of the Pleura in Cases of Severe Tuberculosis of the Left Thorax Wall, the Left Pleura and Lung. By Dr. H. TILMANS (Germany). The patient in whom the above operation was performed was æt. 28 years, and was a sufferer for 2½ years with tubercular empyema. The left lung was crippled, tubercle bacilli were found in the sputum, and there were many fistulæ in the thorax wall. The right lung was as yet healthy. An extensive resection of ribs in front and behind was of little avail, the lung did not expand, and the cavity of the pleura continued suppurating. Tilmans then resected the left anterior thorax wall in toto, from the 2d to the 6th rib, and to the breadth of 5 to 12 cm. The left pleura was extensively diseased and tubercular, the gap made by the resection was covered by a thin flap of skin, the cavity of the pleura and the surface of the contracted lung curetted and tamponed with iodoform gauze. The tuberculosis of the left lung has healed spontaneously, perhaps with aid of the iodoform; it does not expand. The heart is permanently dislocated to the right; the right lung acts well. A cure has resulted, and the operation is recommended for similar cases; also where tumors exist in the pleural cavity.—*Beilage z. Centr. f. Chir.*, No. 25, 1890.

II. Electropuncture in Aortic Aneurism. By Dr. H. TILMANS (Germany). The author performed electropuncture in one case of aneurism of the arch of the aorta, the patient being æt. 54 years, and presenting at the right second intercostal space. The tumor was soft, pulsating, and covered by very thin layer of skin. The patient suffered from vertigo, palpitation and sleeplessness, also a feeling of pain in the right arm and region of the right chest, accompanied by a steady loss of power in the right arm. In the space of about seven weeks the tumor was punctured with the electropuncture needle 13 times. The anode was attached to the needle, the kathode placed upon the skin in the vicinity of the tumor. The sittings lasted 5 to 10 minutes. The current was 30 milliamperes in strength. A flint rheo-

stat was used to regulate the current. The result of the electropuncture was striking; the tumor became smaller and harder, and only deep pulsation could be felt, and the subjective symptoms disappeared. The good result has persisted for a year and 9 months without any accident. In a second case of an enormous aneurism of the aorta ascendens, which projected into the right axillary region, electropuncture was performed 6 times, but the patient died of rupture of the tumor. The electropuncture did not cause the rupture. On autopsy it was seen that at the place of puncture the wall of the aneurism had thickened and clots had formed. The literature teaches us that in most cases the electropuncture method is only palliative, and in some cases valueless. Tilmans had not observed any bleeding or necrosis at the point of puncture, or the rapid formation of clots leading to the liberation of emboli.—*Beilage z. Centr. f. Chir.*, No. 25, 1890.

HENRY KOPLIK (New York).

III. **Epithelioma of the Œsophagus. Ulceration of the Aorta. Death from Hæmatemesis.** By M. VIMONT (Paris). Jean-Louis S., æt. 68 years, a cooper, entered the hospital St. Antonoine, April 29, 1890, coming under the care of M. Landreieux. This man had complained for two months of girdle pains and difficulty in swallowing his food. His appetite was good. For two months deglutition become more painful, he fell away in flesh and decided to enter the hospital; up to then he never had suffered from vomiting or hæmatemesis.

At his entrance into the hospital the patient was emaciated, complained of violent pain in the region of the stomach, of inability to eat solid foods and lives upon bouillon, milk and broths. Catheterization of the œsophagus revealed a stenosis situated 12 inches from the jaw. His age and cachectic appearance made epithelioma seem probable but as there was at the same time an aneurysmatic dilatation of the arteries of the arm an aneurysm of the aorta comprising the œsophagus appeared plausible.

May 11 the patient was taken with hæmatemesis and indeed so gravely that death followed quickly.

The necropsy revealed an ulceration of the œsophagus 4 to 5 cms. in length, the base covered with a bloody detritus mixed with clots of blood. The margins of this ulceration were hard and callous. At the base of the ulcer there was a small opening communicating with the aorta. Microscopically the growth was found to be an ulcerated epithelioma. The stomach was found filled with clots, 500–600 g. in weight. The other organs were negative.—*Bulletins de la Societe Anatomique de Paris*, May, 1890.

IV. A Case of Pulmonary Abscess; Gangrene; Pneumotomy, Followed by Recovery. By v. Openchowski. The patient concerned in this case was a man, æt. 30 years, in whom an abscess of the lung had developed after pneumonia; which finally terminated in gangrene of the lung. Pneumotomy was performed. After resection of a piece of rib, 10 cms. long, it was found that the layers of the pleura were adherent. The thermo-cautery had to be inserted 2 to 3 cms. deep into the lung tissue, and thus the cavity was opened. A large amount of pus evacuated itself on opening. The cavity was irrigated with a lukewarm solution of permanganate of potash. The further course of the case was a favorable one and the patient recovered.—*Zeitsch. f. klin. Med.*, bd. xvi, heft 3 and 4.

V. A Case of Pyothorax Subphrenicus. By Dr. J. W. Runneberg (Finland). The patient, a man, æt. 47 years. He was first taken ill with a chill, about 4 months ago, and had to remain in bed for a long time. He was lately troubled with cough but no expectoration, palpitation and asthma. When he entered the hospital remittent fever was present. The left lung was normal but the right, on physical examination, gave a resonant sound, absence of respiratory sounds and pectoral fremitus.

Exploratory puncture yielded thick, not putrid, but somewhat disagreeably smelling pus. The other organs were healthy; no tubercle bacilli could be detected.

Empyema being diagnosed the right pleural cavity was opened by means of a resection of the 8th rib, but was found to be empty. An

exploratory puncture through the protruding diaphragm showed that the pus had collected beneath it. No further operation was, however, undertaken and the wound only tamponed. As a consequence of this pneumo-thorax of the right side appeared. Five days later 1,000 ccms. of pus were evacuated by incision of the diaphragm. About a month afterward empyema of the right pleura had to be treated by resection of the 8th rib. A fistula, resulting from the last operation, existed at the time of dismissal of the patient, about 4 months after his entrance into the hospital. The patient recovered slowly, later on.—*Finska La Karesellskapets Handlingar, 1890.*

VII. **Cholelithotripsy for the Relief of Occlusion of the Ductus Choledochus with Complete Recovery.** By Dr. Kocher (Berne). The case of the author, occlusion of the choledochus with a perfectly shrunken gall-bladder, did not, on account of the latter circumstance, permit of a cholecyst—enterostomy. Kocher exposed the ductus choledochus by means of a transverse abdominal section parallel to the edge of the thorax, also severing all adhesions of it with the omentum, small and large intestines. The duct could now be seen to be very much dilated in the depth of the abdominal cavity, having there a circumference of about 2 cms. At this place a stone could be detected which lodged very firmly in the duct. Kocher attempted to crush the stone between his fingers (taking it between his thumb and middle finger), in which he succeeded. A smaller calculus which was felt in the duct was also crushed successfully in the same manner. Relief and recovery were prompt and complete. The pieces of the crushed calculi were taken out from the fæces with which they were passed afterward. They presented, when dry, a volume of 2½ ccms.—*Fortschritte der Med.*, No. 12, 1890.

Albert Pick (Boston).

VII. **Two New Cases of Laparotomy for Gunshot Wound of the Abdomen.** By Dr. David Barrow (Lexington, Ky.). In the *Jour. of Am. Med. Ass'n* of June 15, 1889, the author reported four cases of gunshot wound of the abdomen treated by lapa-

rotomy, of whom three died and one recovered. He now reports in the same journal for August 9, 1890, two new cases, with one death and one recovery. The cases are as follows: A boy, æt. 15 years; wound one inch and a half to the left of and on a line with the umbilicus; missile, a 32 calibre ball, discharged at short range. Was seen by the surgeon three hours after the accident. He was then in bed, with the lower extremities flexed; vomiting was frequent, and he complained of great abdominal pain; the facial expression was anxious, and the abdomen was hard and retracted; pulse was over a hundred and rather weak; shock was evident but not extreme. The wound was not probed, but it was plain that the cavity had been entered, and all the symptoms pointed to visceral wounds. As soon as the necessary preparations could be made, taking about an hour, laparotomy was done under chloroform. Incision six inches long; six perforations found in the intestines, four in the small and two in the large bowel; silk suture; reinforcement of one of the suture lines of the large bowel with omentum with copious irrigation with boiled cistern water; glass drainage tube; duration of operation 1 hour and 15 minutes; severe shock at close of operation; reaction slow; morphia in small doses as required to relieve pain for 10 days. The drainage tube was emptied frequently and was removed on the sixth day. Convalescence was uneventful. The bowels were moved on the seventh day and stitches taken out on the eighth. There were several stitch abscesses and a small superficial part of the incision healed by granulation. Three weeks after the operation, on account of imprudence in diet, he had a severe attack of indigestion, with much vomiting, and was greatly exhausted. He is now perfectly well.

Second case. Boy, æt. 13 years, wounded by a 32 calibre ball; point of entrance two inches to the right, and one inch below the level of the umbilicus. Operation four hours later. At the time of operation there were no symptoms indicating serious injury; there had been no vomiting; the pulse was 80 and regular, and the boy was comparatively comfortable; chloroform; four inch vertical incision passing through the wound; the ball had passed downward and to the right. Tracing the intestines five perforations were found, two in the ileum

and three in the cæcum. These were sutured with fine silk by the Czerny-Lembert method; the cavity was irrigated with boiled distilled water; the abdomen was closed and antiseptic dressings applied. Duration of operation a half hour. There was no shock when put to bed, and he rallied promptly from the anæsthesia. For two days he did well, when the temperature went up to 101° and he began to vomit. The abdomen was reopened, and irrigated with boiled distilled water and a rubber drainage tube inserted. He died at the end of the third day of septic peritonitis. Post-mortem demonstrated all perforations securely closed; there was no leak when the gut was distended with water; some loops of the intestines were adherent, and there were several ounces of bloody fluid in the peritoneal cavity. The author believes that this boy would have recovered had he inserted a glass drainage tube at the time of the operation. The operation was done in a negro's cabin, and the hygienic surroundings were most unfavorable.

VIII. **Causes of Error in the Diagnosis of Calculous Affections of the Liver.** By Dr. Cyr (France). The author discusses the rare cases of gall-stone affections, which from their unusual course and complexity of symptoms may lead to errors in diagnosis. The following is a summary of the matter as presented: 1. A gall-stone may exist for a long time with acute disturbances, referable to the liver, arising. 2. During the attacks of biliary colic the pain is frequently referred to the epigastrium and the lumbar region, simulating renal colic; in rare cases, in the right breast and about the umbilicus. 3. The onset of the attack may be so sudden and violent as to suggest acute poisoning. Symptoms of eclampsia and hysteria likewise have been observed; indeed, the attacks may even simulate cholera.

The fact that the treatment of this class of cases is being relegated to the surgeon, renders the matter of greater importance to the latter than heretofore.—*Arch. Gener. de Med.*, February, 1890.

G. R. Fowler (Brooklyn).

IX. Vermiform Appendix Peritonitis. By Dr. Graser, (Erlangen). The author has made his studies in the clinic of Prof. Heineke, of Erlangen. He points out the fact that most of the processes described formerly under the titles of typhlitis, peri-typhlitis and para-typhlitis take their origin from the vermiform appendix. The process begins by ulceration of fæcal calculi and results in the formation of pus with perforation. The whole process is intra-peritoneal since the vermiform appendix is entire surrounded with peritoneum. The dangers of this disease are mostly directed toward the young. Matterstock makes the mortality 30% in the adult and 70% in children up to the 15th year. Formerly perforation into the peritoneal cavity was always fatal. The studies of Mikulicz and Krönlin have made it possible to treat these cases successfully by laparotomy. During the past year 3 children were saved in the Erlangen Clinic by the removal of the vermiform process. In one child there was diffuse septic peritonitis, in the two others the process was circumscribed. In those cases where adhesions prevent the spread of peritonitis and circumscribed abscesses are formed in the meshes of intestines, the disease is not so dangerous as it is prolonged, the mortality according to Fitz being 11%.

The treatment of rest, opium and ice had hitherto only been conducive to the formation of adhesions and limitation of the abscess. Operation here is indicated when an abscess has formed and threatening symptoms (collapse, threatened perforation, intestinal obstruction) appear. The author thinks that in most cases the operation is performed too late or the patient is unnecessarily exposed to a long and exhausting illness. Operation should be performed as soon as the diagnosis of perityphlitis is established. Sudden illness, with high fever and radiating pains and increased resistance are the reliable symptoms of diagnosis. Even in cases where operations have been delayed an exploratory incision is allowable in those cases where even after subsidence of first symptoms, a continuance of pain and resistance and pain on pressure is manifested with evening rises of temperature. In most cases the incision will expose a focus of suppuration. If the vermiform appendix be found it should be removed. No harm is done

if the incision should give negative result. The author thinks the surgeon should have early access to these cases.—*Beilage z. Centblt. f. Chir.*, No. 25, 1890.

X. The Pathology and Therapy of Perityphlitis. By DR. SCHUCHARD (Stettin).. The author has treated 9 cases of perityphlitis during the past year. Of these cases one, a man, æt. 20 years, died on the 8th day, having refused operation. Four cases of mild variety (ages, 8, 22, 19, males) resolved under medicinal treatment. Three cases were operated upon, the first, a male, æt. 32 years, farmer, operated upon in the third week, a large foul abscess in the iliac region opened and drained. The second case, male, æt. 22 years, abscess opened on the fifth day; recovery. The fourth case, female, æt. 21 years, also operated upon on the fifth day; in both the latter cases the author thinks the abscesses were extra-peritoneal. In both these cases the temperature did not go beyond 38.4° and they were plegmons of the retrocœcal tissue—neither fæcal calculi nor the vermiform appendix were found in the abscess cavity. These cases do not bear out the old theory of the causation of these processes by the perforation of the vermiform appendix by fæcal calculi but the above cases should be rather considered paratyphlitis phlegmonosa just as we have in similar cases a paraproktitis. In both diseases the pus of the abscesses is bad smelling and fæcal. The author advocates early surgical interference by an incision similar to that for the ligation of the iliac. In old cases incision is made into the most prominent and fluctuating point of the tumor.—*Beilage z. Centblt. f. Chir.*, No. 25, 1890.

XI. The Radical Treatment of Perityphlitis by the Early Resection of the Vermiform Appendix. By DR. H. KUMMEL (Hamburg). The numerous observations and autopsies which have been made during the past few years leave no doubt but that the disease perityphlitis is caused by an affection of the vermiform process, whether through ulceration, calculi, gangrene or any similar factor leading to final perforation of this process. In the author's classification the first and rare form of trouble is sudden perforation of the appendix

with rapid peritonitis. Operation has given little encouragement in these cases. The author has operated in one case within six hours after perforation and in the peritoneal cavity he found a cherry pit and the perforated vermiform appendix, but in spite of operation the patient died in collapse. In these cases we should remove the vermiform appendix when the strength of patient allows it. The second group of cases are those in which inflammation of the appendix leads to the formation of the well-known perityphlitic abscess. In these cases also the early operative incisions should be made as soon as the diagnosis is established; we should not wait until a distinct abscess is formed and pointing. When the abscess is opened calculi and the gangrenous or necrotic appendix removed and drainage established, if the vermiform processs be not found it should not be sought for too much through the loosening of adhesions or by compromising in any way the solidity of the abscess wall; subsequent formation of cicatricial tissue will perhaps obliterate the process and prevent return of trouble. The author has had a return of disease twice in the same patient. The author thinks that the primary ligature and removal of the appendix prevents formation of fistula, etc., also return of trouble. Perityphlitis must always be regarded as a serious disease, not only on account of the acute peritonitis, or perforation or general perforative peritonitis, but on account of the return of trouble which always threatens the patient. The patient who has once passed through a perityphlitis is always in danger. The least error of diet or trauma is likely to cause new trouble. Those which are most susceptible to relapses are the cases which do not result in the formation of abscess but in exudate around the appendix. In this third group, the chronic relapsing form, the exudate, under the influence of ice, opiates, etc., resolves only to return on the least provocation. In these cases the resection of the process is specially indicated and lasting cure results. The operation is performed after acute symptoms have subsided and the exudate has disappeared. The incision is made along Poupart's ligature or in the median line, the process ligated close to the cœcum and the stump closed with peritoneal suture It is not a difficult operation. The author has operated on two such cases, mak-

ing the total published number of cases in the literature five, one by Treves and two by Senn. The first case was that of a man, æt. 42 years, who had suffered for four years in the above manner. The second was that of a woman, æt. 40 years, who for 15 years had been subject to a list of troubles belonging to the history of this third group. The author after relating at length his two cases advocates the resection of the processus vermiformis in this chronic relapsing form of perityphlitis.—*Beilage z. Centblt. f. Chir.*, No. 5, 1890.

XII. The Extirpation of Carcinoma Situated High Up in the Rectum, in Two Sittings. By DR. L. REHN (Frankfurt, A.M.) The sacral method of Kraske enables us to remove by means of an excellent operating field, carcinoma of the rectum situated high up. Hæmorrhage can be easily controlled and a normal sphincter can be retained. The advantages of the operation are well known but the mortality is great, much more than the 20% now published would lead us to believe. The author lost three of his first five patients. In two cases the circular suture was complicated by the formation of a fæcal phlegmon. A third patient died in collapse twelve hours after operation. The first two cases were operated upon strictly after Kraske's method. Then the author in four cases made use of the osteoplastic resection by a preliminary operative procedure. Incision on the left side of the sacrum and ilium, transverse division of the sacrum between third and fourth sacral openings. Opening of the flap of the bone and soft parts to the right. His two last cases were operated in two sittings and had a more favorable course. In his sixth case the patient contracted an empyema following an attack of influenza at a time when the artificial anus should have closed.

The dangers of the operation are collapse and infection. The preliminary operation as soon as we decide to transversely divide the sacrum is of great moment for the patient. If the para-sacral incision is sufficient we should choose this as the most saving for the patient. It seems that some have overlooked the fact that Kraske, in his preliminary studies, established to his satisfaction that the parasacral incision gives in a remarkable manner room for operating. It remains

Kraske's operation whether we operate simply by incision of soft parts or the resection of bone, partial or complete. The manner of operating is that the growth should be removed, not from below, but from behind and above. The chief danger is infection from fæces, the circular suture holds in the rarest cases only, the rectum bursts generally behind. As precautions against secondary infection we use, 1, iodoform gauze tampon,(not always sufficient); 2, avoidance of the circular suture, the rectum is allowed to remain open in its posterior periphery and the rectum is split toward the anus; 3, colotomy after Schede; 4, Heinecke's measure. The author thinks that that the above dangers may be avoided by two operations, 1st, preliminary operation, exposure of and loosening of the new growth, thereby avoiding any wound of the gut. The central portion of the gut is made movable preliminary to subsequent suture; careful arrest of hæmorrhage. The wound cavity is loosely tamponaded. The loosened gut is brought to the level of the external skin by passing strips of iodoform gauze underneath it. The patient receives opium for four days, then laxatives and injections are used. If it should now be shown that sufficient evacuation of fæces is caused by stricture, the intestine may now be incised without danger above the stricture. About ten days after the first operation the gut is circularly closed and after drains are put in, the wound is closed. By this time the wound has become considerably smaller. A failure of the intestinal suture at this time will not be of any danger to the patient. In case the gut should tear while loosening the growth in the first step then it is advisable to remove the growth at once the central piece of gut is attached to the skin at the lower angle of the wound. The circular suture of the gut follows in a second operation. —*Beilage z. Centblt.f. Chir.*, No. 25, 1890.

HENRY KOPLIK (New York).

EXTREMITIES.

I. The Curability of Malignant Growths of the Thigh-Bone by Exarticulation at the Hip-Joint. By DR. BORK (Rostock). The author has collected in addition to 9 cases operated upon in the Rostock Clinic, 109 cases of exarticulation of the thigh-

bone at the hip for malignant growth of the thigh-bone, occurring in the literature. All the above cases were observed for a number of years. In some cases the fate of the patients after operation is omitted and the pathological nature of the growths is obscured through insufficient data. Of the 118 cases 24 died as a direct result of operation from shock, carbolic acid poisoning, hæmorrhage, sepsis. In four cases the cause of death is not given; they died soon after operation probably as a result of the same. Of the remaining 86 cases, 50 must be rejected as being useless for statistics, nothing being noted of their course after operation and only 10 months have elapsed before publication. Of the remaining 36 cases, 26 died with metastases in other organs after periods varying from 4 weeks to 4½ years. One patient died with a regional return. Five cases died of intercurrent diseases. There remains four cases which were observed for a longer period than ten months. One of these cases which was operated upon 26 months ago was that of a female, æt. 26 years, with a spindle-celled sarcoma. The patient at present presents no symptoms of return. The second case recorded by Küster has remained free from symptoms for three years. The third case (Czerny) a periosteal fibro-sarcoma observed for 3 years, had two nodules on arm and back at time of publication though no internal metastases. MacGraw records the fourth case, observed 12 years, no metastases, though a suspicious nodule is present on the arm. These cases (4) cannot be looked upon as permanently cured. The above tends to throw doubt upon the operation as a curative indication.—*Beilage z. Centblt. f. Chir.*, No. 25, 1890.

HENRY KOPLIK (New York).

GENITO-URINARY ORGANS.

I. **The Operative Treatment of Tuberculosis of the Kidney.** By DR. MADELUNG (Rostock). Operative treatment in these cases was held to be hitherto out of the question but if it is applicable in certain cases as supposed it is absolutely necessary that such a conclusion should be reached from the consideration of statistics, which at present is not the case. The difficulties of treatment

from a surgical point of view lies mostly in the difficulty of making a diagnosis. We are justified in diagnosing tuberculosis of the kidney when the urine contains tubercular matter and the bladder is free from ulcerations of the mucous membrane. The demonstration of tubercle bacilli may be easy, difficult, at times impossible. Iohne's method of demonstrating bacilli is not always successful. Inoculation of animals is too tedious and the absence of bacilli is but negative proof. The inspection of the mucous membrane with Nitze's endoscope is also unsatisfactory. Tuberculosis once established it is necessary to find out which kidney is affected or whether both are diseased or whether the patient has two kidneys. If a tumor can be felt this combined with history of pain is satisfactory, if combined with other urinary symptoms (pus). But even all these symptoms combined or singly can mislead. Exposure of the kidney by the lumbar incision can be of use. Catheterization of the ureters after dilatation of the urethra is to be recommended in certain cases of disease in women. Such cases should be selected for operation in which spontaneous cure is out of the question, in which through long observation the unilateral disease has been made out, and in which the symptoms compel operative interference. Nephrectomy is an easy operation, and in persons much reduced by disease admissable. Tuberculosis of the bladder is the contraindication, but slightly advanced tuberculosis of other organs ought not to prevent operation. The nephrectomy can be palliative in rare cases. Lawson Tait and Küster have had such cases, and author saw one of his own cases uninfluenced by operation. The extra-peritoneal method is the best one to use, and thus the tubercular portion and the capsule (partly) can be extirpated, the ureter after suture is dropped into the wound. Iodoform gauze tampon and secondary suture. The urine, even in cured cases, may for some time after contain pus. A fistula which has remained for one year after operation may finally heal, and the continued use of creasote in the after-treatment seems to be beneficial. Author has collected sixty cases in the literature; Bardenheuer seems to have had the best results. Author has operated in 3 women for tuberculosis of the kidney, and in all has had good results, the patients increasing in weight after operation.

In one case there was affection of the apex. Author recommends nephrectomy in selected cases.—*Beilage zur Centr. f. Chir.*, No. 25, 1890.

HENRY KOPLIK (New York).

II. Renal Surgery. By Dr. EMIL SENGER (Crefeld). Since 1869, when, for the first time Simon extirpated the kidney, the surgery of this organ has made rapid progress, and at present we have aspiration, nephrorraphy, nephrotomy, nephrolithotomy and nephrectomy, and for this progress we are indebted to the progress made in methods of diagnosis. But, unfortunately, as yet this is far from perfect, and in many cases the weighty question of which kidney is affected, the right or the left, has to be decided by the subjective symptom of pain.

The importance of an exact diagnosis is specially important in extirpation of the kidney, for before the operation is undertaken, the surgeon must know if there are two kidneys present, as there may be a congenital absence of one kidney, or a functional atrophy, or a cake-like kidney with one or two ureters, or a horseshoe kidney. The second question which comes up is if the remaining organ is capable of performing its functions in such a manner as to keep the patient alive. Lastly, as Israel remarks, the condition of the heart plays an important part, a weak or fatty heart, or one with valvular insufficiency, tends to show that a compensatory function of the other kidney will be doubtful.

How are the first two questions to be decided? Percussion gives but little on the subject; more is obtained by palpation, and this latter is specially praised by Israel. The normal kidney is extremely difficult to palpate, and Thompson says it is only possible to make out by palpation a much enlarged kidney. There yet remains the rectal palpation of Simon and the exploratory incision.

Even if two kidneys have been made out, nothing is known as to their condition. To find this out G. Simon dilates the urethra and catheterizes the ureters with the aid of the finger introduced in the bladder. Pawlick introduces the catheter without dilating the urethra.

Emmet divides the vesico-vaginal wall and then catheterizes, but all these methods can only be employed in women.

Opposed to catheterization is compression of the ureters. Sands compresses by means of the finger introduced in the rectum. Weir uses a rod, and compresses the tube against the pelvis, but these methods are crude and work in the dark. Hegar dissects the ureter through the vagina and ligates it. Sawyer simply ligates it en masse, but both these methods are also useless in the male. Gluck proposes to dissect out the ureter by a lumbar incision and compress it long enough to obtain sufficient urine from the other kidney. There are two objections to this method, first, the cutting, and second, that the other kidney is rarely so damaged that it does not secrete, and the quantity of urine thus obtained is small. Wolfler determines the quantity of urine for 24 hours; if it is less than half the normal quantity both kidneys are materially diseased; if it approaches half only one kidney is damaged, and the other has taken on no compensating action.

Up to the present time the safest method yet is the formation of a renal fistula (provided that there are sufficient grounds to indicate that the kidney is diseased enough to require extirpation), and to so fix the ureter that all the urine passes externally. The proof that this has happened is not always easy. Israel states that if after the formation of a fistula, the urine from the bladder becomes clear, or if a colored fluid injected through the wound does not pass in the bladder, then it is pretty certain that all the urine from that kidney escapes through the fistula, and then that from the bladder can be conveniently examined qualitatively and quantitatively, and the chances for a nephrectomy considered. According to Israel, the following diseases are suitable for nephrectomy, with previous formation of a fistula: floating kidney, fistula of kidney and pelvis of kidney, wounds of the kidney and ureter, pyonephrosis, hydronephrosis, echinococci, tuberculosis, renal calculi, and tumors, malignant and non-malignant. As regards the diagnosis of these cases, it is better to begin with the most common, viz., pyonephrosis. In simple cases the clinical history is as follows: The patient has been suffering for a longer or shorter time from rheu-

matism or an obscure abdominal affection, or gonorrhœa, or even from a carbuncle; he complains of pain in the region of the kidney, has fever and some swelling of the side, which gradually increases, and later on, gives distinct fluctuation, together with a tympanitic note. The urine may be either purulent or normal. The tumor extends downward from the free border of the ribs. The colon, if distended, lies either over it or to its inner side. The liver may sometimes be isolated from the swelling. Aspiration gives pus. These are the easy cases.

Israel says that pressure on the tumor often causes a little pus to escape in the bladder, and this is of great help in making the diagnosis. If the urine is previously purulent, he compares it before and after pressure. Another important point in diagnosis is that the urine is alternately clear and purulent, according to the increase or diminution in the size of the swelling. The treatment is nephrotomy, and this is generally an easy operation. The abscess cavity, when opened, is explored to find the cause of the suppuration, and if a stone is found its removal is attempted. Often no cause is found, then the best possible conditions for drainage are sought, and the septa in the pelvis of the kidney are completely broken down and the pelvis drained. If the renal fistula causes the patient any pain, or purulent retention takes place, nephrectomy has to be considered. If nephrectomy is decided on, Dr. Senger calls special attention to the danger of tamponing the wound with strong iodoform gauze; on account of the danger of poisoning he says that no stronger than 2% gauze should be used.

The differential diagnosis between hydronephrosis echinococci, tuberculosis and tumors is settled by aspiration.

Tuberculosis as a rule is always secondary to the same trouble in the bladder. Tubercle bacilli in the urine give no indication to the seat of the disease. Tuberculosis is easily mistaken for renal calculus, but in the latter there is frequent and profuse hæmorrhage, while in the former the intervals between each hæmorrhage are very long.

Renal tumors are extremely difficult to diagnose before they have attained a certain size. Hæmorrhage is absent till the growth begins to attack the pelves. The hæmorrhage is similar to that of stone, but is not set up or influenced by bodily exercise. If the tumor has a sharp

border it is not renal; it may be hepatic or splenic. It is as yet impossible to determine if the tumor be malignant or non-malignant, but there is one good point—tumors of the kidneys are generally single and only break through the capsule very late.

In cases of large tumors in children the operative results are very bad; so far, no child has survived any length of time.

In tubercular kidney, nephrectomy is not curative, on account of the dissemination of the process, but it may be palliative.

In all cases it is safer to do a nephrotomy, and secondarily a nephrectomy, if necessary.

If a stone is thought to be present, the pelvis of the kidney may be exposed by an extra-peritoneal incision, and if it is not felt the kidney may be punctured in various directions by a fine needle, and if this yields no results the pelvis may be opened and each calyx explored separately by the finger, and if this is not successful, Thornton proposes a laparotomy and palpation of the kidney with the hand. As last resort, when the pains are unbearable, there always remains extirpation. Still, before resorting to this it is better to first drain the pelvis and wait, for often after this the pains disappear.

Sometimes the stone lies either in the beginning or in the end of the ureter, and in such cases a nephrectomy is useless, and the stone must be sought for by rectal palpation and if found it is to be removed by dissecting out the ureter and opening it.

Floating kidney may exist without causing any pain, or it may sometimes be kept in place by a truss; if this does not answer nephrorraphy may be attempted, and Hahn's method is the best. In some cases this is not successful and the symptoms recur. For such cases nearly all surgeons advise nephrectomy.

Ureteral fistulæ following labor may usually be cured by some plastic operation, while those resulting from operation are not so; in such cases Simon and Bardenheuer advise nephrectomy. If this is not possible there only remains a transplantation of the ureter so as to have it open either on the abdomen, or in the vagina or in the rectum.—*Deutsche Med. Woch.*, No. 11, 1890.

F. C. Husson.

III. Partial Extirpation of the Kidney. By Dr. Kummell (Hamburg). With the constant progress of conservative surgery the question comes up of removing the diseased portion of the kidney instead of the whole of the organ in certain forms of disease.

It is important to determine if a wound of a larger or smaller portion of that organ would heal thoroughly or if a urinary fistula would result which would ultimately require a nephrectomy.

The experiments of Tuffier of Paris are interesting. They show that it is possible to successively remove a large part of the normal renal tissue, and that after a certain number of days, the sooner the less renal parenchyma removed, the specific gravity of the urine and the excretion of urea are perfectly re-established, and that compensation was due partially to hypertrophy of the remaining parenchyma and partly to the new formation of glomeruli, and this happened even in cases of animals in which one kidney had already been extirpated and was followed by a partial removal of the kidney on the other side. Tuffier as a result of his experiments states that in animals from 15 to 23 grains of renal parenchyma is sufficient for 2 pounds of weight. Reckoning the adult human weight at 140 lbs., from 1200 to 1500 grains of renal substance, apart from the capsule, which is not counted, is sufficient to maintain life, or about $\frac{1}{3}$ or $\frac{1}{4}$ of the normal organ.

Surgically, therefore, it is possible to remove a large part of the kidney, the remaining portion still retaining its function, and in partial destruction of the renal tissue it is not necessary to remove the whole organ, and we can be satisfied with a partial excision specially, if the condition of the other kidney is not known. Partial excision is in order in cases of not very large abscesses, in certain injuries, in circumscribed tumors, and even for exploratory purposes.

The only case of partial nephrectomy found in literature was reported by Herczel as occurring in Czerny's clinic in Heidelberg, when a gardener æt. 30 years was operated on account of hæmaturia and enlargement of the right kidney following a blow. On the convexity of the organ at the junction of the middle and lower third a fluctuating spot was incised, the cavity filled with detritus was scraped with a sharp spoon, and an elliptical resection of the renal tissue followed by

partial suture and tamponade was done. The case healed rapidly. In September, 1889, Dr.Kummell operated on a woman for an abscess of the kidney which was situated in the upper third of the organ,and due to a calculus which was removed at the same time. Smaller abscesses were found leading into the main cavity. These were all scraped with a sharp spoon, and the walls formed by renal parenchyma were excised and partially brought together by sutures and fixed in the external wound, about $\frac{1}{3}$ of the organ was thus destroyed or removed. The wound was packed with iodoform gauze and allowed to heal by granulation. The subsequent progress of the case was all that could be desired.

The urine flowed through the ureter and on the day after the operation contained some pus, which rapidly disappeared, and the secretion soon became normal. The patient was discharged in October with a granulating wound and since then she has gained 20 pounds.

In another case, a man æt. 55 years, Dr.Kummell excised the upper convex portion of the right kidney but the tissues were so scant that sutures would not hold and tamponade had to be resorted to. For the first few days after the operation the urine contained blood but this soon disappeared. No urine, escaped through the external wound. From the above related cases it is seen that the renal parenchyma seems to lend itself to operative interference. Hæmorrhage is easily checked by tamponing, and the secreted urine escapes by the normal passages without going through the wound and without there being any tendency to the formation of a fistula.

These circumstances are very favorable to exploring the pelvis of the kidney as has been already suggested by Israel.—*Centblatt f. Chirurgie*, No. 18, 1890.

F. C. Husson (New York).

IV. Operations for Stone in the Bladder. By Sir Henry Thompson (London). The author read before the Royal Medical and Chirurgical Society a paper presenting the results of 964 cases of operation for vesical calculus, 500 of which had been discussed by him 12 years previously. Of the whole number 101 were hospital cases and

863 private cases. There were 17 children and 14 women, leaving 933 operations upon the adult male. The history of his cases embodied a history of operations for stone from 1854 to the present time.

The introduction of Bigelow's method of employing a single sitting reduced the mortality in the writer's hands to nearly one half.

An analysis of his entire series shows that vesical calculus is not more common in children than in adults, as was formerly supposed—an impression due to observations in hospital practice. The ages of his male patients were as follows, the mean age being 62½ years:

Below 16 years,	3.
16 to 24 years,	8.
25 to 50 years,	89.
51 to 70 years,	565.
Above 70 years,	184.

The oldest patient was 91 years old, and was subjected to lithotrity. The largest calculus weighed 14 ounces and was composed of uric acid.

The author insisted upon the desirability of removing the stone at the earliest possible moment in the elderly male adult, where it is frequently found, for two reasons. (1) The stone, when small, can be removed more readily, and with little risk. (2) At this stage of calculous disease the re-formation of an acid stone can almost invariably be prevented by strict dietetic precautions.

Of the author's adult male cases, 800 were by lithotrity, 115 by perineal lithotomy, and 18 by supra-pubic lithotomy. The author's predilection for the crushing operation is evident. In the adult crushing may be carried to stones of four ounces, provided a large evacuating tube can be passed. The adult male of 65 to 75 years possesses a very insensitive and capacious urethra, while he had found the most sensitive urethras in men of from 25 to 40, and any over-distention of these frequently gives trouble. If an evacuating tube as large as No. 18 can be passed, a three-ounce uric acid stone when crushed can be removed with the greatest facility. In case of an irritable urethra with a rigid prostrate, admitting only a No. 13 or 14, the supra-pubic operation is preferable for a small calculus.—*Lancet*, March 15, 1890.

JAMES E. PILCHER (U. S. Army).

V. The Symptoms and Conditions Which Justify Nephrolithotomy, the Chief Conditions Simulating Renal Calculus, and Some Practical Points in the Operation of Nephrolithotomy. By W. H. A. JACOBSON (London). In opening, the author draws attention to the more rapid advances made in operative technique than have been made in diagnosis, especially as regards renal calculus. He mentions five cases in which he operated and no stone was found. He then considers the symptoms and conditions which justify nephrolithotomy under the following heads:

1. Continued hæmaturia, or passage of blood and pus.—He considers this a very important symptom and describes it as a hæmaturia of long standing, often repeated, frequently increased by exercise, rarely profuse, and never producing anæmia, as in new growth of the kidney. The blood is always intimately mixed with the urine, while the tint varies from a bright or deep red to a smoky or porter like color. He also mentions the following fallacies: (*a*) It may be absent to the last. This, he thinks, may be due to a contraction of the muscles about the kidney, so that movement is restricted. (*b*) The hæmaturia may be only temporary; this occurs with small renal calculi and when encysted. (*c*) It may not appear until late in the case. (*d*) Hæmaturia also occurs with other conditions, as passage of uric acid crystals, tubercular kidney, granular kidney, growths, increased intrarenal pressure, etc.

2. Pain and tenderness, lumbar and elsewhere. Under this division J. calls attention to the fact that lumbar pain varies in its characters, and that while in some cases it is relieved by pressure, in others it is not. He also mentions the fact of radiating pains being present in other parts of the body, as testis, foot, calf, etc., and having no reference directly to the kidney. Another point is the frequency of nocturnal exacerbations of the pain. These are apt to be very severe. With regard to tenderness, he refers to Mr. Jordan Lloyd's paper, in which much stress is laid on percussion over the kidney, in the loin just below the last ribs, in a direction upward, forward, and slightly inward. This is best practiced with the patient standing upright. The blow should be sharp and decisive. This gives rise to a characteristic stabbing pain.

3. Points in the previous history. Long standing lithiasis and oxaluria is usually accompanied with changes in the minute anatomy of the kidney, and it is obvious that with this condition there is probably a bilateral stone. The passage of numerous small calculi does not point to the necessity of operation, while well marked renal symptoms without the passage of any calculi, point to the probability of a single small calculus. Renal colic may be caused by a stone distending the pelvis of the kidney and not passing into the ureter.

4. Frequency of micturition. The point raised in connection with this symptom is whether the presence of a renal calculus without bladder irritability does not point to the location of the stone in one of the calyces rather than in the pelvis of the kidney. Bladder irritability may also be an aid in making the differential diagnosis between calculous and tubercular kidney, as with the former condition the symptoms usually subside with rest in bed.

5. Absence of any condition in the rest of the genito-urinary tract which will explain the symptoms.

6. Failure of previous treatment to give relief.

The chief conditions simulating renal calculus are next considered.

1. Lithiasis can be easily distinguished by the results of treatment.

2. Tubercular kidney. The chief aids in diagnosis of this condition are given as:

(*a*) Pyuria usually presents early with albumen, and without much hæmaturia.

(*b*) Careful examination of urine shows caseous matter and debris of connective tissue and the bacillus tuberculosis.

(*c*) Pyrexia is present from the first.

(*d*) Early exploration of the kidney to clear up the case and to perform nephrectomy, if the kidney be found tubercular. J. calls attention to the fact that in the earlier stages usually only one kidney is involved.

3. Slight pyelitis, not tubercular; 4, Movable kidney; 5, Aching kidney, especially common in women; 6, Nephralgias due to disease in parts adjacent to the kidney, as duodenal ulcer, intestinal irritation, etc.; 7, Gall stones retained in the gall-bladder; 8, Spinal disease; 9,

Interstitial shrinking nephritis; 10, Growth of the kidney in its early stage, and 11, Malignant disease involving the last dorsal nerve, are given as other conditions often difficult to diagnose from renal calculus.

The following are given as the chief practical points in the performance of nephrolithotomy; 1. To count the ribs. 2. To make a sufficiently free incision. 3. To pack away the colon with sponges. 4. To draw the kidney up into or out of the wound if palpation and exploration have failed to find the stone. 5. In puncturing the kidney, to try, as far as possible, to open the calyces systematically. 6. If palpation and acupuncture fail to find the stone the kidney should be opened and sounded. For this Jacobson recommends the incision of Mr. Jordan Lloyd. 7. Hæmorrhage is certainly arrested by firm, careful plugging with gauze. 8. Sources of difficulty in removing the stone; a mobile kidney; a stone situated on the anterior surface and near the entrance of the vessels; a small stone in a sacculated kidney. 9. In case of multiple calculus in a suppurating damaged kidney, nephrectomy should not be done until after the kidney has been thoroughly drained. 10. If the kidney has been much disturbed it should be stitched *in situ.—Brit. Med. Jour.*, Jan. 18, 1890.

H. B. DELATOUR, (Brooklyn.)

VI. A Case of Pyonephrosis; Nephrectomy; Cure. By DR. JANSEN (Norway). The patient, æt. 44 years, a woman and a morphine habitue. She has had a tumor for 13 years, but it has caused her pain only within the last two years. The pain, which was of a radiating character, extended over the whole abdomen and upward toward the shoulder, as well as down the thigh of the corresponding side. Lately the tumor has increased in size, this being accompanied by pressure in the region of the bladder and difficulty in urination. Blood was found in the urine at intervals. The solid tumor filled the entire left side, extended to the median line and somewhat below the umbilicus. It presented an uneven feel to the touch. A slight dislocation upward was possible, but caused pain. The left ureter could be felt to be of normal size from the region of the left sacro-iliac synchondrosis up to the pelvis of the kidney. The right kidney could

be distinctly palpated; it was smooth to the touch and not sensitive to pressure. The urine, on microscopic examination was found to contain albumen, hyaline and granular casts, pus corpuscles, pavement-epithelium and jagged cells. The quantity of urine oscillated between 500 and 1500 ccms. within 24 hours. Extirpation of the kidney was performed on March 16, 1889, an incision 15 cms. long and parallel to the curve of the ribs being made. In the removal, the tissue of the kidney was accidentally incised and 500 ccms. of thick pus evacuated. Two silk ligatures were applied to the pedicle, the ureter being ligated separately. The enucleation of the 22 cms. long sac was accomplished without hæmorrhage. The further course of the operation as well as of the recovery was uneventful. The urine, for a short time after the operation, contained traces of albumen. The careful pathologico-anatomical examination of the removed tissue led to the exclusion of tuberculosis. The patient was dismissed as cured on June 17, 1889. —*Norsk. Magaz. for Laegevidensk.*, 1890.

VII. Case of Renal Cancer; Removal by Nephrectomy. By J. SVENSSON (Sweden). The patient, female, æt. 41 years. The tumor, of the size of a child's head and movable, was situated on the right side. It was removed by an abdominal incision along the outer border of the rectus muscle, which procedure was here preferred to that which the writer usually employs in this operation, or the lumbar incision which is used when the diagnosis is not entirely certain. The further course after the operation was favorable and the patient left the hospital cured. She returned, however, for œdema of the face and lower extremities with general weakness, but these symptoms disappeared after a few days' treatment. The further course of the case is unknown. The extirpated kidney was twelve centimetres long, seven in breadth and five in thickness Five-sixths of the tumor consisted of an adeno carcinoma of the upper portion of the kidney. The tissue of the kidney was normal and amounted to two-thirds of a normal kidney. The tissue of the tumor was separated from that of the kidney by membrane, and the whole mass invested by the renal capsule. —*Svensk. Lakaresallsk. Forhandl.*, p. 51.—*Nordiskt Medicinskt Arkiv.*, bd. 21, hft. 1.

VIII. Removal of a Vesical Tumor Through the Normal Urethra, After Preceding Location by Means of Cystoscopy. By DR. ANTAL (Germany). Antal removed three times tumors from the bladder per vias naturales, after preceding location by the aid of cystoscopy. The second and third case concerned the same patient (female). Antal succeeded twice in grasping and twisting off a tumor with the straight urethral forceps without preceding dilatation of the urethra. The tumors which he removed were papillomata. The repetition of the operation was not necessitated by recurrence but on account of development of an analogous growth at some other place in the same bladder.—*Fortschritte der Med*, bd. 8, No. 10, 1890.

IX. On Lithotripsy and Cystotomy. By DR. ED. SALVIA (Italy). The author reports on two cases of patients suffering from similar diseases, but in which he had to adopt two different modes of operative treatment. Both patients suffered from vesical calculus and also in consequence of a coxitis sinist., which had occurred in the third respectively fourth year of age of the patients, from dislocation of the femur upon the dorsum ilii. In the one patient, æt 23 years, the internal condyle of the left femur rested upon the middle of the right thigh. The affected side could not be moved actively at all; passive movement permitted the thigh to be lifted 15 cms. A common metallic catheter could be introduced by tour-de-maitre, while an assistant raised the left thigh. The deeper portion of the urethra and the bladder were dislocated to the right. The stone was removed by means of lithotripsy. The further course of this case was normal and recovery prompt.

The second case was that of a patient, æt. 45 years, whose dislocated femur rested upon the inner third of the right thigh. His pelvis was slightly inclined toward the left, but rotated in a high degree anteriorly and very asymmetric. In spite of repeated and different attempts to introduce an ordinary sound, Salvia did not succeed. Finally Gross's spiral metallic catheter could be introduced. This difficulty in introducing instruments was due to the considerable displacement of the

bladder. Salvia failing to introduce an instrument for lithotripsy, concluded to perform lithotomy. On account of the position of the left thigh, obesity of the abdominal walls and insufficient expansibility of the bladder suprapubic operation had to be excluded. Lateral incision had also to be avoided on account of the abnormal size and position of the ascending ramus ischii and the descending ramus of the pubic bone. The median incision was therefore adopted. A long piece of Nelaton's catheter was adjusted to the end of a lithotomy sound and, after several trials, introduced into the bladder; the operation upon the sound being thus rendered possible.

Recovery also took place in this case without complications—*La Riforma Medica*, 1890.

X. The Surgical Treatment of Ectopia of the Testicle. By DR. TUFFIER (Paris). The writer comes to the conclusion that an intervention is justifiable in inguinal ectopia of the testicle in all cases where, after the fifteenth year, there is no tendency to spontaneous recovery. This intervention varies:

1. If the adhesions are apparently slight, massage causing descent of the testicle, fixation, by means of one or two stitches of silk, will suffice; the suture may be passed through the lower part of the testicle without any danger to the gland. Then a bandage may be applied to keep the testicle in position.

2. If this method fails, then recourse must be had to the bloody procedure: an incision is made, exposing the serous sheath and its contents, then resection of the vagino-peritoneal canal if it exists, or of its traces if it be obliterated; the testicle is then brought down into the scrotum and fixed to the septum. Fixation of the spermatic cord at the pillars of the inguinal canal he regards as a very important and useful step.

3. If the ectopia be accompanied by a hernia of the same side then the radical operation should be performed, the testicle brought down and fixed; in case of strangulated hernia in a young man this procedure was carried out.

Early age is a contraindication to operation.—*Gaz. des Hop.*, March 28; 1890.

ALBERT PICK (Boston).

TUMORS, ABSCESSES.

I. Two Cases of Actinomycosis in Man; Operation. By DR. RANNEFT (Holland). 1. A man, æt. 20 years, who otherwise felt quite well, noticed since a few weeks, a swelling of his neck, which, however, did not trouble him very much. A short time before this occurred he had suffered from tooth-ache, which was caused by a carious molar of the left lower jaw. Slight dysphagia set in during the last days; otherwise the appearance of the patient was good. A hard tumor without distinct outlines, of the size of a walnut, somewhat sensitive to pressure, not fluctuating and on a level with the larynx, was to be detected on the left side of the neck. On account of enlargement of the tumor and increase of the dysphagia within the next few months, deep exploratory puncture was performed and an amount of pus evacuated. On incision pus was also found in the deeper structures. The operation was followed by drainage and appropriate dressing. Closure of the wound took place after one week. About four weeks later a new tumor of the size of a hazelnut appeared at the same place which was caused to disappear by the same treatment, after ten days. After about five months another swelling had formed at the same spot, on incision of which a whey-like fluid was evacuated, which contained numerous yellow granules; the latter having at most the size of a pin-head. The examination of these granules showed the case to be one of actinomycosis. Under anæsthesia the incision was enlarged, the cavity curetted and iodoform dressing applied. A perfect cure resulted, which even now (several months after the operation) continues. The point of entrance of the fungus was very probably also in this case the carious teeth.

2. Dr. Blok: This case, female peasant, æt. 54 years, who had very much to do with cows. She noticed since three weeks a swelling on the neck. The tumor was oval, of the size of a hen's egg, extended over the anterior aspect of the neck, from the right above downward to the left and covering in its median part the thyroid cartilage and the upper rings of the trachea. The tumor was adherent to the skin, which was cyanotic, very much infiltrated, but not glossy. At its peri-

phery the tumor was hard and there was fluctuation in the middle. The woman had frequently suffered from caries dentium, and had also now four carious teeth in her lower jaw and several stumps coated with tartar. The other organs showed nothing abnormal and there was no fever. A small enlarged lymphatic gland was noticed in the region of the right lower jaw. After incision of the fluctuating part of the tumor the evacuated pus was examined and actinomycosis filaments and gonidiæ were found. The proposed curetting of the diseased portion was not permitted by the patient; therefore, after evacuation of the pus and disinfection of the wound, an antiseptic dressing was only applied. The wound healed in eight days and no relapse has occurred after eight weeks. The swollen gland on the right side was still present, and its persistence was probably favored by the bad condition of the patient's teeth.—*Nidrl. Tijd. v. Genesk.*, 1889, ii, No. 20.

A. PICK (Boston.)

II. Case of Subcutaneous Intra-Muscular Echinococci. By DR. ALEXANDRA G. ARKHANGELSKAIA (Golitzino, Russia). The author details the following rare case from her recent practice. A robust peasant woman, æt. 49 years, whom she had formerly treated for tertiary syphilis, applied on account of a "lump" on her back, of two week's standing. The tumor was painless, soft, covered with normal, freely movable skin and firmly adherent about the lower angle of the left shoulder-blade, being apparently embedded into the attachment of the infraspinate muscle. A syphilitic gumma was diagnosed, and iodide of potassium ordered. In spite of the treatment, however, the tumor continued to grow. In a month it attained the size of a hen's egg, when it became evident that the growth consisted of individual small-sized soft and elastic nodules or lobes. On examination five months later (eight months after the first symptoms), the tumor was found to measure 29 centimetres in length and 19 in breadth, having extended both upward along the scapula, and downward to the axillary line. An exploratory puncture gave negative results, but was followed by the appearance of local redness, and pain on any movements of the limb. About a fortnight after the tapping, the tumor

burst and a large amount of serous fluid with numerous hydatids escaped, the bladders varying in size from a pea to a hen's egg. A number of collapsed cysts was subsequently removed by the author. In view of the appearance of a high fever and suppuration, the wound was enlarged 4 centimetres. A capacious purulent cavity became exposed, which contained numerous small pieces of dead bone, the outer and lower edge of the scapula, as well as a portion of the 8th rib, being found destroyed. After the removal of the fragments and a thorough disinfection of the cavity, fever at once subsided, pain disappeared, and a speedy healing ensued. When examined a month afterward, the woman was perfectly well, all movements of her left upper limb quite free. There remained only some decrease in the size of the left scapula, and a small scar adherent to the 8th rib.—*Meditzinskoie Obozrenie*, No. 12, 1890, p. 1120.

VALERIUS IDELSON (Berne).

III. Trephining of the Ilium for Iliac Abscess. By A. F. McGILL, F.R.C.S. (Leeds). A girl, æt. 18 years, whose right hip-joint had been excised five years previously, complained of pain extending downward from the hip to the knee, which was not aggravated by moving the thigh. No fulness was found in the iliac fossa until three weeks later when an abscess there was successfully aspirated. The temperature still remaining hectic in character, the abscess was opened a week later above and behind the anterior superior spine of the ilium. On passing the finger into the abscess cavity, a piece of the iliac fossa the size of a sixpence was found to be denuded of periosteum. Over this point an incision was then made down to the bone, which was then opened by a trephine into the abscess. The suppurating cavity was thoroughly scraped and freely irrigated and drained. The result was perfectly satisfactory, rapid recovery ensuing.

The author remarks that this treatment may be of advantage when a collection of pus exists under the iliac fossa and when this collection is circumscribed and limited to the fossa. Pus in this position, when left untreated, will probably pass under Poupart's ligament and point in the upper part of the thigh, simulating psoas abscess. If they are

then opened or burst a long sinus will be left which will take a considable time to heal.—*Lancet*, April 5, 1890.

JAMES E. PILCHER (U. S. Army).

IV. The Treatment of Fistula in Ano and Periprocteal Abscesses. By DR. PAUL SENDLER (Magdeburg). The author has successfully practiced the following operation in eleven cases: The patient having been properly prepared by having his rectum emptied, is deeply anæsthetized, the parts shaven and a grooved director is then introduced in the fistula and the tissue divided. The hæmorrhage being arrested, the fistulous tract is eradicated with scissors, forceps, or knife. Diverticula and abscess cavities are laid open and the granulations scraped out. Then the wound is brought together by sutures. When there are large abscess cavities the etage suture is necessary—in smaller abscesses deep sutures only are used and they should be passed through the base of the wound.

The margins of the fistulæ are brought together in a similar manner, care being taken to suture the sphincter muscle. Finally the mucous membrane is sewn up.

In severe cases where a great part of the rectum is involved this operation can not always be performed, but the abscess cavity should be scraped and drained.

The dressing is simply iodoform sprinkled over the wound, and a pad of gauze held in position by a T bandage.

The patient is kept in bed for five or six days and opium administered to prevent the bowels from moving, at the end of this time the bowels are moved either by castor oil or by an enema.

If primary union has occurred the patient may be discharged in five or six days. In the severest cases the cure is usually completed in four or five weeks though the patient is always able to leave his bed in fourteen days.

In no case of the author's was the operation followed by incontinence of fæces.—*Deut. Med. Woch.*, No. 14, 1890.

F. C. HUSSON (New York).

BONES, JOINTS, ORTHOPÆDIC.

I. Operations Upon Paralytic Joints. By Dr. KARENSKI. The author, referring to the operation of Albert (arthrodesis) in which the object is sought to produce anchylosis of the knee-joint in order that the lower extremity may become a support for the body, instead of a hindrance to locomotion, in cases of "dangle leg" from paralysis, states that the opinion is generally endorsed that if the function of the muscular apparatus attached to the joint is not restored in from 6 to 9 months the condition may be considered a permanent one. In view of this, interference, with a view of fixing the joint, and thereby restoring, in some degree, its usefulness, by means of Albert's operation, is to be considered a justifiable one.

While in the case of the lower extremity the limb can be restored to a condition of comparative usefulness by means of apparatus for facilitating locomotion, and, therefore, the operation may not be deemed one of absolute necessity, in the upper the case is quite different. Here the muscles of the shoulder proper being paralyzed, the entire upper extremity becomes completely useless, albeit the muscles which move the forearm still possess their function. By the aid of the pectoralis major and latissimus dorsi muscles, certain movements of the arm can be performed, but only in a slinging or jerky manner, but by fixing the humerus to the shoulder blade by an arthrodesis at the shoulder-joint, proper adduction and abduction movements of the arm may be obtained, and by means of the scapula the arm may be held in position.

In the case of the elbow joint this operation is only to be recommended when there exists absolutely no power of flexing the forearm upon the arm.

The operation heretofore has been most frequently performed upon the knee and ankle joint.—*Deutsch. Med. Wochenschrift*, 1890, No. 4.

F. C. HUSSON (New York).